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A Strategic Plan for NOAA's National Ocean Service

FY 2003 – FY 2008 and Beyond

U.S. Department of Commerce
National Oceanic and Atmospheric Administration
National Ocean Service

Foreword from the Assistant Administrator

I am pleased to present the National Ocean Service (NOS) Strategic Plan, which charts our course for preserving and enhancing coastal and ocean ecosystems while supporting long-term economic growth. Developed by NOS' leadership and employees, this Plan describes our goals and strategies for achieving them over the next five years and beyond. This Plan also provides a framework within which we will execute NOS programs and measure performance to better connect to NOAA's planning, budget formulation, budget execution, and performance measurement.

As we enter the 21st century, we are determined to build on the great strides we have made during the past 30 years. This Strategic Plan outlines NOS' framework for addressing the challenges and opportunities in coastal and ocean stewardship and building the capacity to address new priorities. We will constantly seek innovative measures and approaches to ensure that America's coastal resources sustain livelihoods, provide recreational opportunities, and support the economy now and in future generations.

This is a dynamic and flexible Plan that will be revised and updated annually. We welcome input from our employees and stakeholders to ensure that this guiding document remains relevant and useful. I look forward to working with NOS' partners and customers as we pursue the goals and strategies outlined in this Plan.

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INTRODUCTION: NOAA'S NATIONAL OCEAN SERVICE

Sustaining the Prosperity of America's Coastal Regions

America's coastal regions, from the headwaters of coastal and Great Lakes watersheds to 200 miles offshore, offer vast opportunities and challenges, including:

- Increasing demands on coastal ecosystems from increased human population and economic development, such as marine recreation and transportation;
- Evolving local, state, federal, and international institutional roles;
- Seasonal, interannual, and long-term ocean variability; and
- Advances in science and technology.

Americans expect their coastal regions to provide a wide range of important resources and services, including food and fiber; recreation and tourism opportunities; flood control, water purification, and habitat from wetlands; safe and efficient marine transportation systems; and a diverse storehouse of plants and animals that support commercial, recreational, and aesthetic interests.

While these expectations and uses are constrained by societal changes on land, the dynamics of the open ocean, and they often conflict with one another, NOAA's National Ocean Service (NOS) envisions a time when the coastal region is capable of providing an optimal and sustainable level of the resources and services that society desires. To achieve that vision, NOS' mission is to:

Manage society's uses of coastal ecosystems to sustain their natural resources and services.

NOS – one of five major line offices within NOAA – is well positioned to monitor, observe, understand, describe, assess, and predict natural and anthropogenic changes in U.S. coastal regions, and to use that information to engage, advise, and inform its stakeholders as well as directly manage multiple uses to sustain ecosystems. NOS does not accomplish this alone. Its success, as well as the prosperity of the coastal region, relies heavily on its diverse stakeholders, including:

- State, local, and tribal partners that implement resource management programs;
- Partners in academia that provide a solid scientific base for management and operations;
- Customers in the private sector who utilize NOS information and technology; and
- Business and environmental communities that help NOS balance environmental and economic interests.

As part of NOAA and the larger federal system, NOS' efforts are critical to ensuring the nation's public safety, economic prosperity, and environmental well-being. This Strategic Plan outlines NOS' long-term approach to addressing increasingly complex issues in a rapidly changing world. It outlines the office's efforts to meet existing and emerging challenges, while enabling communities to capitalize on opportunities that ensure environmentally sound economies. The NOS Plan parallels and complements the NOAA Strategic Plan, and guides NOS science, service, and management efforts toward achieving the agency's overarching goals. The mission goals, outcome measures, strategies, and cross-cutting priorities from the NOAA Plan are the framework for this Plan.

GOALS

In support of NOAA's four mission goals, NOS will build on past successes, expand current efforts, and build new capacities to provide science, service, and management directly and through its partners. NOS will focus its human and fiscal resources and collaborate with federal, state, local, private-sector, non-governmental organizations, and academic partners to make measurable progress on each of these goals during the next five years and beyond. The specific NOS performance metrics that will track such progress can be found in Appendix A.

GOAL 1. PROTECT, RESTORE AND MANAGE THE USE OF COASTAL AND OCEAN RESOURCES THROUGH ECOSYSTEM-BASED MANAGEMENT

The coastal region contains some of the nation's most economically valuable, ecologically diverse, and sensitive natural resources. Currently, more than half of the U.S. population – 141 million people – lives within 50 miles of the coast, which occupies only 11 percent of the land area of the lower 48 states. Coastal and marine waters support 28 million jobs, generate $54 billion in annual goods and services, and provide a tourism destination for 180 million Americans each year. Despite the region's benefits, increasing population, recreation, and development opportunities have fragmented natural spawning grounds, degraded water quality, and increased the vulnerability of coastal communities to natural hazards.

NOS and its partners will gather information on coastal resources, mitigate and respond to damage from natural disasters and human activities, provide tools and information to improve the sustainable use of coastal ecosystems, manage coastal resources to maximize their benefits to society, and promote environmentally sound economic development. Working in partnership with federal and state agencies, NOS will continue to protect, restore, and manage coastal uses through its legislative mandates, including the Coastal Zone Management Act; National Marine Sanctuaries Act; Coral Reef Conservation Act; Estuary Restoration Act; Comprehensive Environmental Response, Compensation, and Liability Act; Clean Water Act; Oil Pollution Act; and Harmful Algal Bloom and Hypoxia Research and Control Act.

Relevant NOAA Outcome Measures

- *Increased number of coastal and marine ecosystems maintained at a healthy and sustainable level.*
- *Increased social and economic value of the marine environment and resources (e.g., seafood, recreation and tourism).*
- *Increased number of acres and stream-miles restored for coastal and ocean species.*
- *Improved ecological conditions in coastal and ocean protected areas.*

OBJECTIVES

NOAA identified three objectives for this Goal. These objectives are scientifically, socially, and economically interdependent. As NOAA moves toward long-term, comprehensive ecosystem-based management, it will strive to balance the multiple uses of coastal resources, including fishing; tourism; species, habitat, and biodiversity protection; boating and transportation; and other national and international activities that support the economy and coastal communities. Such ecosystem-based

management requires improved predictive understanding of natural and human pressures that change and restructure ecosystems. To meet this longer-term objective, NOS will invest in improved ecosystem understanding, refine definitions of regional ecosystems, identify indicators of ecosystem health, and create new approaches to meet the nation's requirements for information, tools, and capabilities.

In the near term, NOAA and NOS will also make progress within each of the following three objectives. NOS' contributions to these efforts are outlined below.

Objective A. Protect, Restore, and Manage Use of Ocean, Coastal, and Great Lakes Resources

NOS will continue to promote healthy coastal ecosystems by managing human uses of natural resources so that economic development is conducted in ways that maintain ecosystem diversity and long-term productivity. NOS will accomplish this objective through focused research, monitoring of coastal ecosystems, assessment and restoration of injured habitats, development and delivery of spatial information and other tools and technologies for decisionmakers, training and technology transfer to build improved state and local management capacity, and information to increase public understanding and stewardship of marine and coastal resources.

NOS STRATEGIES:

Monitor and Observe: NOS' monitoring and observing efforts will track changes in coastal stresses (i.e., pollution, invasive species, climate change, extreme natural events, land and natural resource use); key ecosystems (e.g., coral reefs, estuaries); and marine protected areas (MPAs) such as National Marine Sanctuaries and National Estuarine Research Reserves. Data and information from NOS programs and its partners will continue to assist managers and policymakers in evaluating resource conditions, taking management actions when necessary, and assessing the impacts of management strategies. Through monitoring the environments, NOS and its partners measure the effectiveness of its activities to promote protected species recovery, particularly within the coastal zone, Great Lakes, estuarine and ocean MPAs.

Understand and Describe: NOS research will help characterize Great Lakes, coastal, and ocean ecosystems and resources and the natural and human-induced stresses that impact them. This information will help predict ecosystem change, design effective restoration strategies, and provide useful and affordable geospatial and remote sensing tools. Through efforts to understand and explore Great Lakes, coastal, and marine ecosystems, NOS will inventory, characterize, and map marine protected areas, coral reefs, and submerged cultural resources.

Assess and Predict: NOS will improve data management, conduct assessments, and provide ecological forecasts of the potential impacts of multiple stressors (i.e., pollution, invasive species, climate change, extreme natural events, land and natural resource use) on coastal ecosystems and resources. It will identify and map sensitive resources and areas, evaluate the risk and vulnerability to communities and natural resources, forecast the movement of spilled oil and chemicals, and recommend cleanup actions to expedite recovery. It will develop methods to characterize and detect marine contaminants, biotoxins, and harmful algal blooms, and evaluate their significance to marine species and habitats. NOS will support competitive, peer-reviewed, and interdisciplinary research designed to improve scientists' ability to forecast the ecological effects of stressors in support of coastal management and the integrity of coastal communities.

Engage, Advise and Inform: NOS will provide information to the public about the need to protect and conserve marine and coastal resources. This includes supporting K-12 programs, high school environmental science, fellowships and internships through state and local governments, and adult education. NOS will provide critical scientific and technical assistance to decisionmakers on various issues such as hazards risk and vulnerability assessment, watershed restoration and coastal zone management, oil and other hazardous releases, and natural resource damage assessment. Through scientific publications, formal and informal needs assessments, training, and workshops, NOS will provide the data, information, and technical tools that coastal communities need to better manage environmental threats and restoration of resources.

Manage: NOS will use its legal mandates to manage uses in ways that protect and restore the nation's Great Lakes, coastal, and marine ecosystems. It will assist coastal states and territories in implementing their approved coastal zone management programs. It will fulfill its natural resource trustee mandates to restore coastal resources by preparing for, and responding to, threats such as oil pollution and hazardous spills. NOS will improve the management of the nation's existing collections of marine protected areas and develop a framework for a more effective national system of MPAs that protects key habitats and allows sustainable uses of marine resources. NOS will accomplish this complex management strategy in collaboration with other parts of NOAA, federal, state, and local agencies, industry, academia, and nongovernmental organizations.

Objective B. Recover Protected Species

Through its research and management of coastal resources and its responsibilities as a natural resource trustee, NOS supports the protection and restoration of marine mammals and other protected species.

NOS STRATEGIES:

Monitor and Observe: Through monitoring the environment, NOS and its partners will be able to measure the effectiveness of their activities to promote protected species recovery, particularly within the coastal zone, Great Lakes, estuarine, and ocean MPAs.

Understand and Describe: NOS will conduct research on environmental stressors that may affect marine mammals and other protected species. NOS will provide scientific support to NOAA enforcement programs and other agencies to help resolve marine forensic issues through integrative strategies using morphological evaluations, biochemistry, chemistry, and genetics. Research on restoration techniques will support the maintenance and recovery of protected species habitats.

Assess and Predict: NOS will model and assess risks to marine mammals and other protected species from environmental stressors; provide species recovery forecasts; and develop preparedness, response, and restoration tools for protected resources and habitats.

Engage, Advise and Inform: NOS will provide information to the public to encourage the protection and restoration of protected species. NOS will engage and inform decisionmakers by providing training and technical assistance regarding protected resources and restoration opportunities, including developing and delivering environmental sensitivity maps. NOS will assist and advise coastal decisionmakers on the best possible, informed decisions to aid in the recovery of protected species.

Manage: NOS will protect marine mammals and other protected species, and their habitats in the Great Lakes, estuarine, and ocean MPAs. NOS will develop integrated networks of MPAs throughout the U.S. that will help ensure the persistence and sustainable use of marine resources.

Objective C. Rebuild and Maintain Sustainable Fisheries

Through its research and management of coastal resources and its responsibilities as a natural resource trustee, NOS will support the protection and restoration of protected species.

NOS STRATEGIES:

Monitor and Observe: Through monitoring the environment, NOS and its partners will be able to measure the effectiveness of their management activities to promote sustainable fish populations, particularly in the coastal zone, Great Lakes, estuaries, and ocean MPAs.

Understand and Describe: NOS will support research on restoration techniques and develop environmental sensitivity index maps that support the maintenance and recovery of fish habitats.

Assess and Predict: NOS will assess and characterize coastal fish habitats, and develop tools to prepare for, respond to, and restore injuries to these habitats.

Engage, Advise and Inform: NOS will provide information to the public on the importance of and how to rebuild and maintain sustainable fisheries through education forums, workshops, training, and education materials. NOS will engage and inform coastal decisionmakers on sustainable fisheries issues by providing training and technical tools so they can make informed decisions regarding fisheries management. NOS will advise decisionmakers on best practice science, ecosystem, and community information to aid best practice decision-making.

Manage: NOS will help support important fisheries species and their habitats in existing estuarine and marine protected areas and networks. NOS will help develop special management zones, including no take marine reserves, within larger multi-use marine protected areas, such as National Marine Sanctuaries. The special management zones will allocate uses to appropriate habitats and times and improve the sustainable use of a wide variety of marine resources.

GOAL 2. UNDERSTAND CLIMATE VARIABILITY AND CHANGE TO ENHANCE SOCIETY'S ABILITY TO PLAN AND RESPOND

Through the Coastal Zone Management Act (CZMA), NOS develops state capabilities to plan for and manage the impacts of climate change, and protects key estuarine areas designated within the National Estuarine Research Reserve System. Through the National Marine Sanctuaries Act and the Coral Reef Conservation Act, NOS protects and conserves coral ecosystems in the context of a changing climate. To manage these resources under NOAA's authority and to assist the states in managing their coastal resources under CZMA, NOAA must provide information and capabilities to measure, predict, and assess the impacts of climate variability and change. These impacts on land and in the coastal ocean are driven by significant variations upland and in the global ocean. For example, a key piece of information includes relative sea-level trends derived from NOS' long-term water-level stations, which are operated under the authority of the U.S. Coast and Geodetic Survey Act. These relative trends are the result of changes in both ocean dynamics and vertical land movement.

Among the potential coastal impacts from climate variability and change, the following will be most relevant to NOS' mission:

- Effects of changes in relative sea-level and coastal storms on the sustainability of coastal communities and wetlands;
- Effects of changes in precipitation and freshwater flow, and resulting changes in nutrient delivery, on the management of coastal eutrophication; and
- Effects of changes in ocean temperature, circulation, and carbon dioxide on the sustainability of coral ecosystems.

Relevant NOAA Outcome Measures

- *Increased use and effectiveness of climate observations to improve long-range climate, weather, and water predictions.*
- *Increased use and effectiveness of climate information for decisionmakers and managers (e.g., for industry, natural resource and water managers, community partners, and public health professionals).*
- *Increased use of the knowledge of how climate variability and change affect commerce.*

NOS STRATEGIES:

Monitor and Observe: NOS will measure changes in absolute and relative sea level, and other coastal indicators of the effects of climate variability. Emphasis will be placed on monitoring and observing annual and long-term changes in sea level, coastal topography, land cover, shoreline position, near-shore bathymetry, and the frequency of extreme high waters. Temporal trends in coastal sea-surface temperatures, chlorophyll, nutrients, and salinity will also be measured.

Understand and Describe: NOS will conduct research on the impacts of climate change in coastal communities and ecosystems, with an emphasis on techniques to reduce uncertainty in future forecasts. A key feature of this research is understanding how climate-driven changes in regional to global ocean dynamics impact the coastal region.

Assess and Predict: NOS will develop and improve ecological forecasts and integrated assessments of the impacts of climate variability and change on coastal communities and the ecosystems upon which they depend. Emphasis will be placed on forecasts and assessments of the impacts of changes in relative sea level, storm frequency, and coastal inundation; water and nutrient inflow and estuarine eutrophication; and ocean surface temperature, carbon dioxide, and coral survival.

Engage, Advise and Inform: NOS will support internal and extramural partnerships to provide public information on climate and climate related issues. NOS will increase the availability of its information and delivery of products such as sea-level trend products, ecological forecasts, and integrated assessments. NOS will engage, advise, and inform decisionmakers on climate change issues through education forums and technical assistance at the local, state, and federal levels.

GOAL 3. SERVE SOCIETY'S NEEDS FOR WEATHER AND WATER INFORMATION

In fulfilling its responsibilities under the Coastal Zone Management Act, NOS helps coastal communities handle the impacts of changes in weather and water resources. More than half of the U.S. population lives in the coastal zone and confronts a wide range of natural hazards. They include the potential loss of life and property from hurricanes and severe storms, floods and landslides, tsunamis, shoreline erosion, and land subsidence. Coastal storms alone have a serious economic impact, with damages estimated between $10 and $50 billion each year. Growing population levels and expanding coastal development will increase the number of people vulnerable to natural hazards. NOS will help reduce the impacts from natural hazards by providing federal, state, and local decisionmakers with timely and accessible information, tools, and financial assistance. These resources will strengthen the abilities of coastal states and communities to plan for, and recover from, storms and other natural hazards.

Relevant NOAA Outcome Measure

Increased satisfaction with and benefits from NOAA information and warning services, as determined by surveys and analysis of emergency managers, first responders, natural resource and water managers, public health professionals, industry, government and the public.

NOS STRATEGIES:

Monitor and Observe: As part of an emerging integrated ocean observing network, NOS will collect and provide fundamental ocean, coastal, estuarine, and inland data to address impacts from coastal storms and other natural hazards. Such information includes accurate, up-to-date hydrographic survey data and physical oceanographic and geodetic information.

Understand and Describe: NOS will invest in research and technology to better understand the relationships among coastal communities, weather, and the consequences of weather and water forecast modeling on ecosystems. It will study the impacts of regional weather, water availability, and extreme events on the coastal region by improving the integration of terrestrial, meteorological, and oceanographic information.

Assess and Predict: NOS will develop new coastal, bay, and harbor circulation models of water levels, subsidence, currents, temperature, and salinity to better forecast the impacts of storm events on coastal ecosystems and communities. It will support advanced modeling of regional coastal ecosystem processes influenced by weather and water, and predict the response of natural, economic, and social systems to extreme events.

Engage, Advise and Inform: NOS will support internal and extramural partnerships to engage and inform the public on weather and water issues. NOS will engage and inform decisionmakers through education materials, technical assistance, training, and financial assistance to mitigate environmental, social, and economic impacts of natural hazards. NOS will advise decisionmakers on weather and water issues by providing decision support tools. NOS will assess user and decisionmaker requirements by including users and decisionmakers in the design, implementation, and evaluation of products, services and applications.

GOAL 4. SUPPORT THE NATION'S COMMERCE WITH INFORMATION FOR SAFE, EFFICIENT, AND ENVIRONMENTALLY SOUND TRANSPORTATION

NOS helps mariners navigate with confidence. Under the authority of the Coast and Geodetic Survey Act, and as clarified through the Hydrographic Services Improvement Act, NOS provides world-class products and services such as electronic navigational charts, Physical Oceanographic Real-Time Systems, and access to the global positioning system to improve precision in vessel positioning and location. NOS' operational programs connect the dynamics of the open ocean to operationally-critical variations in the nation's ports and shipping channels to acquire and deliver the data and information needed to fuel these products. These programs operate primarily along the coast, but NOS has charting responsibilities for the nation's Exclusive Economic Zone, and interests in the role of the open ocean in driving coastal processes. NOS' role in navigation services has never been more important as the U.S. Marine Transportation System (MTS) prepares for exponential growth over the next 20 years. As over 95% of goods (by tonnage) are imported or exported through U.S. ports; it is vital for this economic lifeline to flow as safely and as efficiently as possible.

Through the use of state-of-the-art technology, national observation and reference systems, and strategic partnerships with key federal, state and local agencies, NOS will meet the challenges posed by ever larger vessels, hazardous cargoes and materials, aging landside facilities and infrastructure, and threats to national security. The MTS uses some of the nation's most valuable natural resources, so it is critical to minimize the risks to society and the environment inherent in marine transportation.

NOS' role does not end where the ship meets the shore. The growing strain on landside intermodal connections is already evident and is expected to increase. Under the Coastal Zone Management Act and other authorities, NOS will work with port and coastal communities to ensure that port operations and development proceed in efficient and environmentally sound ways. NOS will help guide port improvements such as dredging projects, construction of waterfront intermodal facilities, and conversion of abandoned industrial properties (brownfields) to productive port facilities that help reduce costly port congestion and delays. NOS' precise nationwide positioning network will also support the efficient transport of goods from coast to coast, and facilitate improvements in other transportation-related industrial and public sectors.

Relevant NOAA Outcome Measures

- *Increased use and effectiveness of environmental information for planning for marine, air, and surface transportation systems.*
- *Reduced number of and harm from navigation-related accidents due to grounding and allisions (hitting fixed objects).*
- *Increased number of ports where the environmental consequences of port development and operations are minimized.*
- *Increased number of ports with an improved vessel cargo carriage capacity due to use of NOAA's marine navigation information products and services.*
- *Increased safety and productivity of transportation systems.*

NOS STRATEGIES:

Monitor and Observe: NOS will use advanced technology to accurately monitor and observe up-to-date

hydrographic and shoreline data, as well as physical oceanographic information such as tides, water levels, and tidal currents, supported by NOS' precise positioning reference network. NOS systems will be important contributions to the emerging integrated ocean observing network.

Understand and Describe: NOS will support research and technology on new ways to collect and analyze data, display spatial framework data layers, and model the coastal ocean environment to support a safer, more efficient and environmentally sound MTS.

Assess and Predict: NOS will develop assessment and predictive tools to ensure that its constituents can make informed decisions regarding navigation, port security, and coastal resource management

Engage, Advise and Inform: NOS will engage and inform the public about commerce and marine transportation issues through advanced delivery systems such as the Internet, E-Commerce, and other innovative approaches to ensure that its customers receive products and services in a timely fashion. NOS will continue to engage and inform decisionmakers and partners at all levels regarding marine transportation issues through continual assessments of user requirements and effectiveness of the information and services provided.

CROSS-CUTTING PRIORITIES

In addition to its four mission goals, NOAA identified six cross-cutting priorities to guide decisions about agency priorities and to improve its operations and delivery of services during the next five years. NOS contributes to each of these cross-cutting priorities as described below.

INTEGRATED GLOBAL ENVIRONMENTAL OBSERVATION AND DATA MANAGEMENT SYSTEM

NOAA Strategy: NOAA will develop an Integrated Global Environmental Observation and Data Management System based on user requirements and an integrated architecture.

NOS is actively engaged in building, operating, and providing access to ocean and coastal observing systems and information. Because NOS' observing systems are significant components of the nation's "backbone" of coastal observations, NOS will continue to work within NOAA and with its federal, state, and regional partners to integrate coastal observing systems within the Integrated Global Environmental Observation and Data Management System.

NOS will integrate key attributes of its observing systems within a common NOAA architecture and develop a single NOS web portal to deliver monitoring data, including spatial data from these systems.

NOAA Strategy: NOAA will promote national and international cooperation in developing this system.

NOS will support NOAA's international role by continuing operational ties to its international counterparts with hydrographic, geodetic, and water-level observing systems. NOS international activities include supporting observing systems for climate change, transportation and commerce, and weather and water.

NOS will continue to support observing systems that transcend U.S. borders, including Great Lakes activities with Canada and nautical charting with Mexico. NOS will also continue to assist in operational technology transfer with military agencies that work internationally, such as the National Imagery and Mapping Agency and the Office of the Oceanographer of the Navy.

NOAA Strategy: NOAA will promote regional and local cooperation in developing this system.

NOAA, as one of the leading federal agencies implementing the Integrated Ocean Observing System, will have a significant role in the implementation of regional observing systems. NOS will foster partnerships with other federal agencies to design and implement a federal system that is integrated with regional programs. NOS will foster technology transfer of accepted standards, procedures, and protocols for all aspects of observing systems so that information collected from regional systems will be seamlessly absorbed into federal databases. Regional observing systems will assist in filling gaps in federal observing systems by increasing the spatial frequency and focus products toward local and regional users. NOS will build upon its significant present capacity and infrastructure to assist local and regional users, and will help plan, design, and implement regional and local pilot programs. NOS, as well as other

NOAA offices, will continue to work with the interagency National Ocean Research Leadership Council and the Ocean.US office to support development of a national federation of regional associations for coastal observations.

ENVIRONMENTAL LITERACY, OUTREACH, AND EDUCATION

NOAA Strategy: NOAA will improve community and public awareness of its mission goals and accomplishments, as well as basic knowledge of the environment and human interactions with it.

NOS will help NOAA enhance public access to information, tools, and other resources to ensure informed choices for coastal and ocean stewardship. NOS will expand its communications with stakeholders, K-12 and college students, and the public using world-class communications products and innovative methods to reach both traditional and untraditional audiences, using multi-lingual products where possible. All interested parties should be aware of NOS and NOAA missions and products, and their importance to safe and efficient navigation; economic productivity and environmental protection; environmental stewardship; the long-term viability of coastal communities; vulnerability to coastal hazards; and disaster response.

NOAA Strategy: NOAA will create an agency-wide mechanism for distributing and using its educational outreach materials and services, and for measuring effectiveness of its outreach efforts.

NOS will work with NOAA to develop, implement, and maintain educational programs that meet constituents' needs and are delivered efficiently and cost-effectively. NOS education programs include those for coastal program managers and local decisionmakers to facilitate environmentally sustainable and economically efficient management of coastal areas, as well as programs to promote safe navigation and provide tide and current information. NOS will continue to coordinate its education programs with other federal, state, and local governments, as well as with schools and institutions of higher learning to maximize the scope and effectiveness of NOAA outreach efforts.

NOAA Strategy: NOAA will actively encourage and promote careers in the environmental sciences.

NOS is currently participating in an agency-wide initiative to increase the number and diversity of students involved with NOAA. NOS and NOAA will continue to promote and enhance environmental science programs, internships, fellowships, and scholarships to minority and under-represented populations in the environmental sciences. These efforts are intended to foster the next generation of NOAA's workforce. NOS will increase participation in career fairs and seminars for high school and undergraduate students.

SOUND, STATE-OF-THE-ART RESEARCH

NOAA Strategy: NOAA will increase its investments in short- and long-term research and in development of advanced technology to understand, describe, and predict changes in the natural environment.

NOS' science mission is to assess and predict the status of and trends in coastal ecosystems and their responses to human and natural stresses for effective management and stewardship. To do this, NOS researches and models the nature and rate of change of coastal ecosystems, which are shaped by stressors such as pollution, invasive species, climate change, extreme natural events, and land and natural resource use. These stressors can impact ecosystems independent of one another or at the same time, and yet their cumulative effects are poorly understood. Therefore, NOS will support short- and long-term research that develops new paradigms for understanding, describing, and predicting the effects of these stressors. NOS will also invest in the development of advanced technologies to gather and analyze environmental data.

NOAA Strategy: NOAA will accelerate the transfer of knowledge and technology into operational use and ecosystem management.

NOS conducts and supports research and technology to understand, describe, and predict coastal ecosystem dynamics. The results can then be applied to promote effective management and stewardship of coastal ecosystems. NOS will deliver timely and relevant results from its research, monitoring, and assessment programs via reports, scientific publications, nautical charts, technical assistance, and the Internet for NOAA and its constituents to use in operations and ecosystem-based management.

NOAA Strategy: NOAA will strengthen external partnerships and increase interactions by ensuring that 50% of new research funds are spent within the external community (e.g., university, private sector) via competitive, peer-reviewed proposals.

NOS strives to maintain a balanced research portfolio that addresses both short- and long-term needs and supports the areas of operational coastal oceanography, safe and efficient marine transportation, productive coastal communities, and stewardship of coastal and marine ecosystems. Recognizing that these activities are too diverse for NOS to tackle alone, the agency vigorously supports external research efforts. As NOS' research enterprises grow, it will strive to balance internal and external efforts and respond to broader NOAA strategies.

INTERNATIONAL COOPERATION AND COLLABORATION

Through international organizations and bilateral agreements with other governments, NOS improves capacities for coastal and marine stewardship and safe navigation. As a globally recognized leader in coastal and marine policy, management, and science, NOS helps to set international policy, builds coastal and ocean management capabilities, and conserves marine biodiversity worldwide. At the same time, U.S. programs are strengthened by sharing experiences and ideas with other countries and regions. NOS managers and scientists benefit from experience gained by tackling similar coastal and marine problems in other countries, which often possess fewer resources than those available in the U.S. The integration of NOS' international programs with NOAA's efforts will increase the capacity to address multidisciplinary, transboundary, and multicultural issues intrinsic to effective coastal management in the U.S. and abroad.

NOAA Strategy: NOAA will leverage United Nations Specialized Agency agreements, as well as bilateral relationships with individual countries, to maximize the development and use of research,

observations, environmental science services, and environmental management for the mutual benefit of all parties.

NOS will continue to work with United Nations Specialized Agencies, including the United Nations Environment Programme, International Hydrographic Organization, International Maritime Organization, and Intergovernmental Oceanographic Commission, to represent U.S. interests in coastal and marine observations, mapping and charting, geodesy, and management.

NOAA Strategy: NOAA will promote international consensus and cooperation in support of its mission and U.S. foreign policy through multilateral and bilateral conferences and relationships.

NOS will continue to work with the U.S. Department of State to encourage coastal and marine ecosystem-based management through Science and Technology Agreements with China, Vietnam, Korea, and other countries, and the U.S.-Japan Agreement on Natural Resources. The U.S. made a commitment at the 2002 World Summit on Sustainable Development to implement the "White Water to Blue Water" Initiative pilot program for ecosystem-based management in the Caribbean and NOS will play a major role in this effort. NOS will continue to work closely with the World Bank's Global Environmental Facility Council, including programs related to adaptation to climate change in the Caribbean and the conservation of marine biodiversity in China. NOS will continue to chair the World Conservation Union (IUCN) World Commission on Protected Areas marine program, as it has since 1999. It will also be a major contributor to the International Coral Reef Initiative and its Global Coral Reef Monitoring Network. Through these relationships, NOS gains experience and provides leadership in meeting NOAA's goals of increased consensus-building and cooperation.

HOMELAND SECURITY

NOAA Strategy: Through its core capabilities, strategic investments, and partnerships, NOAA will expand its support for homeland security, coordinating delivery of its products, services and capabilities to Federal, state, and local emergency managers and responders, and strengthening its own infrastructure to protect agency personnel, facilities, and information services.

To support NOAA's homeland security effort, NOS will provide integrated and accurate data in near real-time, continue to test and improve its Continuity of Operations Plans, and develop essential backup systems to eliminate single points of failure in case of a catastrophic event. NOS will provide and improve hazardous-material trajectory forecasts, dispersion models, and chemical threat analyses that allow emergency managers and first responders to make timely and effective decisions. It will expand the number of harbors capable of providing rapid updates of water levels, tides and currents through the Physical Oceanographic Real Time System Program. In the event that ships must be rerouted around or evacuated from a U.S. port or harbor, NOS tide and current information will support safe passage with little interruption to maritime commerce. NOS can accurately and rapidly disseminate nautical chart updates and critical chart corrections to mariners, and create and distribute temporary charts and data as needed by primary responders. NOS will also increase the number and quality of its electronic navigational charts, which are key to maritime security, port safety, and uninterrupted maritime commerce.

NOS will work at both the national and regional levels, and utilize advanced delivery systems (e.g., NOAA's Enterprise GIS Initiative) to inform its partners and customers who rely on geospatial data for decisions related to homeland security.

ORGANIZATIONAL EXCELLENCE: Leadership, Human Capital, Facilities, Information Technology and Administrative Products and Services

The President's Management Agenda (PMA) provides a strong framework for improving the management and performance of federal programs. Consistent with the PMA and NOAA's goals, NOS will pursue management activities that enable it to respond to emerging coastal issues of the 21st Century, provide timely delivery of products and services to customers, leverage new technology and information delivery, and streamline key management practices and processes.

NOAA Strategy for Human Capital: NOAA will expand workforce training, incentives, succession planning, and other administrative tools to recruit and retain a skilled workforce.

Building upon a FY 2002 strategic workforce analysis to assess its employees' knowledge, skills, and abilities, NOS will develop strategies to identify new competency requirements, find innovative ways to attract highly qualified professionals, retain highly qualified employees, and train future leaders. NOS will continue to administer its pioneering Legacy Program, which was established to encourage employees nearing their retirement to pass on their knowledge, experience, and best practices.

NOAA Strategy for Facilities: NOAA will improve processes for requirements development, construction processes, consolidation of services and facilities and increase funding for deferred maintenance.

NOS will work with NOAA to develop and implement a ten-year NOAA Facilities master plan. This plan will survey and classify the condition of all NOAA facilities (leased and owned); prioritize repairs and maintenance; and assess the need for replacement, consolidation, and abandonment of buildings. In addition, NOS will employ best practices in safety, environmental compliance, and security management to ensure that its employees work in a safe and secure environment.

NOAA Strategy for Information Technology: NOAA will maintain and improve its technology infrastructure in order to enhance its scientific productivity through seamless sets of observed and forecast products, advanced high-bandwidth networks, super-computing capabilities, and support for increasingly flexible sources for the delivery of information.

NOS is committed to providing a robust, reliable, and secure infrastructure that delivers products and support services to constituents now and in the future. NOS will develop and implement initiatives to improve the delivery of products and services, including an easy-to-use, on-line grants application system; World Wide Web portals for single points of access to NOS and NOAA information; and a constituent feedback system to improve services. NOS will develop metadata for existing and planned data sets to document data quality, avoid redundant data collections, and facilitate data access through

NOS World Wide Web portals. These data and other NOS technology and information will be protected through the development and implementation of Continuity of Operation Plans, as well as vigilant system monitoring and increased security awareness. NOS will work with other NOAA offices to improve collaborative efforts by implementing advanced networking capabilities and improving database management, storage area networks, and contingency planning.

NOAA Strategy for Administrative Programs and Services: NOAA will improve the efficiency, accountability, and transparency of its administrative programs and services, including financial performance, human resources, information technology and electronic government, grants management, competitive sourcing, and budget and performance integration through process optimization and assessing customer satisfaction.

NOS is committed to providing administrative and management services that support its scientific and technical programs and sustain organizational excellence. NOS will explore new improvements and tools to streamline internal administrative processes to serve its customers and constituents. NOS will continue to support NOAA's efforts to improve performance and accountability in management of its financial and human resources, electronic government, competitive outsourcing, grants management, and budget and performance integration.

NOS is committed to providing its products and services to the public as efficiently and cost-effectively as possible. NOS will continue to use a combination of sourcing mechanisms and partnerships to obtain the best science and services for its constituents. NOS will continue to improve its financial performance with real-time data, accurate and up-front planning requirements, and strict adherence to procedures set forth by NOAA to avoid audit issues. NOS will continue to improving accountability among its programs through performance-based budgeting and management. This strategic plan sets forth the goals and priorities for the agency, the strategies through which NOS will support those goals and priorities, and the performance measures against which progress will be determined.

APPENDIX A: Performance Measures

This appendix maps NOS performance metrics to the NOAA performance measures, strategies, and goals. Please note that this appendix is currently under development. NOS has a broad portfolio of products and activities, many of which support a NOAA performance measure but are not currently captured by a specific NOS performance metric. NOS is currently undergoing a review of its existing performance metrics in an effort to develop a comprehensive and meaningful set of metrics that will be tracked and reported on regularly.

GOAL 1: PROTECT, RESTORE, AND MANAGE THE USE OF COASTAL AND OCEAN RESOURCES THROUGH ECOSYSTEM-BASED MANAGEMENT

Objective A. Protect and restore ocean, coastal, and Great Lakes resources

Strategy: Monitor & Observe

NOAA Performance Measure	NOS Performance Metric	Baseline	Target
Increased area covered and number of ecological conditions monitored by state-of-the-art observation systems and platforms that provide necessary information for NOAA's stewardship responsibilities	Percent of water quality, reef habitats, and associated biological communities monitored by states and territories in a similar manner and at consistent locations to enable a national assessment of coral reef ecosystems.	40% (2001)	100% (2007)
Increased area covered and number of ecological conditions monitored by state-of-the-art observation systems and platforms that provide necessary information for NOAA's stewardship responsibilities	Percent of significantly upgraded management capabilities and information delivery systems at National Estuarine Research Reserve (NERR) sites.	44% (2001)	73% (2008)

Strategy: Understand & Describe

NOAA Performance Measure	NOS Performance Metric	Baseline	Target
Increased ocean, coastal, and Great Lakes areas explored, mapped, characterized, and inventoried	Percent of shallow water coral reefs in U.S. waters mapped and characterized (cumulative).	20% (2001)	100% (2007)
Increased number of impacted human communities where sufficient data exist to analyze and understand the economic and social benefits, costs, and impacts of management decisions.	Percent of Nation's 40 major coastal ecosystems for which inventories, databases, and assessments of water quality and natural resources have been developed or enhanced (cumulative).	35% (2001)	46% (2008)
Increased number of impacted human communities where sufficient data exist to analyze and understand the economic and social benefits, costs, and impacts of management decisions.	Percent of Nation's 40 major coastal ecosystems that have assessments of levels and effects of toxic contamination and/or nutrient enrichment (cumulative).	35% (2001)	46% (2008)
Increased number of techniques and tools that can be used to restore and protect ocean, coastal, and Great Lake resources.	Number of Nation's coastal ecosystems with reduced risks of habitat loss from releases of oil and hazardous chemicals due to response planning, mitigation, modeling, monitoring, and assessments (per year).	5 (2001)	5 (2008)
Increased number of techniques and tools that can be used to restore and protect ocean, coastal, and Great Lake resources.	Number of environmental technologies and tools developed that enhance monitoring, assessment, management, and restoration of coastal habitats (per year).	6 (2001)	8 (2008)
Increased number of techniques and tools that can be used to restore and protect ocean, coastal, and Great Lake resources.	Number of natural resource damage assessments completed or cases settled to recover funds for restoration of coastal resources injured by pollution (cumulative).	46 (2001)	91 (2008)
Increased number of marine resources potentially available for commercial use (e.g., pharmaceuticals, aquaculture species for human use).	NOS does not currently have a performance metric to support this NOAA measure of success. However, NOS conducts activities that support this measure and a performance metric is under development.		

Strategy: Assess & Predict

NOAA Performance Measure	NOS Performance Metric	Baseline	Target
Increased number and accuracy of forecasts of significant ecological events and trends (e.g., harmful algal blooms, coral bleaching, and population shifts).	Percent of system implementation completed to issue watches and warnings for coral reef bleaching events for all states and territories with at least a 90% Probability of Detection, 1 week Lead Time, and less than 10% False Alarm Rate (cumulative).	11% (2001)	62% (2008)
Increased number and accuracy of forecasts of significant ecological events and trends (e.g., harmful algal blooms, coral bleaching, and population shifts).	Number of U.S. coastal regions with systems to predict and reduce the impacts of harmful algal blooms (cumulative).	1 (2001)	3 (2006)
Increased number and accuracy of models to understand and predict the interactions of species and their environment.	Number of natural resource damage assessments completed or cases settled to recover funds for restoration of coastal resources injured by pollution (cumulative).	46 (2001)	91 (2008)

Strategy: Engage, Advise & Inform

NOAA Performance Measure	NOS Performance Metric	Baseline	Target
Increased percentage of resource consultations that result in "no net negative impact".	NOS does not currently have a performance metric to support this NOAA measure of success. However, NOS conducts activities that support this measure and a performance metric is under development.		
Increased percentage of coastal communities and coastal inhabitants aware of, and acting appropriately to minimize, their impacts on ocean, coastal, and Great Lakes resources.	Number of activities conducted to provide a technically trained work force and environmentally informed citizenry (per year).	22 (2001)	36 (2008)
Increased percentage of coastal communities and coastal inhabitants aware of, and acting appropriately to minimize, their impacts on ocean, coastal, and Great Lakes resources.	Number of nation's coastal ecosystems with reduced risks of habitat loss from releases of oil and hazardous chemicals due to response planning, mitigation, modeling, monitoring, and assessments (per year).	5 (2001)	5 (2008)

Increased percentage of coastal communities and coastal inhabitants aware of, and acting appropriately to minimize, their impacts on ocean, coastal, and Great Lakes resources.	Number of improved information management tools developed to assist coastal hazard mitigation (cumulative).	5 (2001)	13 (2008)

Strategy: Manage

NOAA Performance Measure	NOS Performance Metric	Baseline	Target
Increased percentage of coastal ocean, and Great Lakes areas for which management, restoration, and response plans have been successfully developed and implemented in conjunction with NOAA's international, Federal, state, local, and tribal partners.	Percent of significantly upgraded management capabilities and information delivery systems at National Estuarine Research Reserve (NERR) sites.	44% (2001)	73% (2008)
Increased percentage of coastal ocean, and Great Lakes areas for which management, restoration, and response plans have been successfully developed and implemented in conjunction with NOAA's international, Federal, state, local, and tribal partners.	Percent of National Marine Sanctuary (NMS) sites that have reached a baseline operational level.	46% (2001)	100% (2005)
Increased percentage of coastal ocean, and Great Lakes areas for which management, restoration, and response plans have been successfully developed and implemented in conjunction with NOAA's international, Federal, state, local, and tribal partners.	Percent of National Marine Sanctuary (NMS) sites that have significantly upgraded management capabilities.	77% (2001)	100% (2005)
Increased percentage of coastal ocean, and Great Lakes areas for which management, restoration, and response plans have been successfully developed and implemented in conjunction with NOAA's international, Federal, state, local, and tribal partners.	Percent of 35 Coastal Zone Management (CZM) states and territories with fully and conditionally approved Coastal Nonpoint Programs.	91% (2001)	97% (2003)
Increased percentage of coastal ocean, and Great Lakes areas for which management, restoration, and response plans have been successfully developed and implemented in conjunction with NOAA's international, Federal, state, local, and tribal partners.	Percent of 35 coastal states and territories within the Coastal Zone Management (CZM) Program System.	94% (2001)	100% (2006)

Increased percentage of coastal ocean, and Great Lakes areas for which management, restoration, and response plans have been successfully developed and implemented in conjunction with NOAA's international, Federal, state, local, and tribal partners.	Number of capabilities upgraded among approved Coastal Zone Management (CZM) Programs (cumulative).	21 (2001)	42 (2008)
Increased percentage of coastal ocean, and Great Lakes areas for which management, restoration, and response plans have been successfully developed and implemented in conjunction with NOAA's international, Federal, state, local, and tribal partners.	Number of nation's coastal ecosystems with reduced risks of habitat loss from releases of oil and hazardous chemicals due to response planning, mitigation, modeling, monitoring, and assessments (per year).	5 (2001)	5 (2008)
Increased number of invasive species under control.	NOS does not currently have a performance metric to support this NOAA measure of success. However, NOS conducts activities that support this measure and a performance metric is under development.		
Increased ocean fisheries production through environmentally sound aquaculture technology.	NOS does not currently have a performance metric to support this NOAA measure of success. However, NOS conducts activities that support this measure and a performance metric is under development.		
Increased number of acres and stream-miles of habitat restored for ocean, coastal, and Great Lakes resources.	Number of hazardous waste sites where coastal habitat protection and restoration is improved through NOAA activities (cumulative).	395 (2001)	477 (2008)
Increased number of acres and stream-miles of habitat restored for ocean, coastal, and Great Lakes resources.	Percent of environmental restoration of the Pribilof Islands completed in cooperation with the Alaska Dept. of Environmental Conservation (cumulative).	21% (2001)	99% (2008)

GOAL 1: PROTECT, RESTORE, AND MANAGE THE USE OF COASTAL AND OCEAN RESOURCES THROUGH ECOSYSTEM-BASED MANAGEMENT

Objective B: Recover Protected Species

NOS does not currently have performance metrics to support this NOAA objective. However, NOS conducts activities that support this objective and specific performance metrics are under development.

GOAL 1: PROTECT, RESTORE, AND MANAGE THE USE OF COASTAL AND OCEAN RESOURCES THROUGH ECOSYSTEM-BASED MANAGEMENT

Objective C: Rebuild and Maintain Sustainable Fisheries

NOS does not currently have performance metrics to support this NOAA objective. However, NOS conducts activities that support this objective and specific performance metrics are under development.

Goal 2. UNDERSTAND CLIMATE VARIABILITY AND CHANGE TO ENHANCE SOCIETY'S ABILITY TO PLAN AND RESPOND

NOS does not currently have performance metrics to support this NOAA goal. However, NOS conducts activities that support this goal and specific performance metrics are under development.

Goal 3. SERVE SOCIETY'S NEEDS FOR WEATHER AND WATER INFORMATION

Strategy: Monitor & Observe

NOAA Performance Measure	NOS Performance Metric	Baseline	Target
Increased observations obtained and used from partners, both international and domestic	NOS does not currently have a performance metric to support this NOAA measure of success. However, NOS conducts activities that support this measure and a performance metric is under development.		
Increased observations archived, available, and accessible.	Percent of National Water Level Observation Network (NWLON) stations fully operational.	60% (2001)	75% (2008)
Increased number of new multi-use observing systems deployed.	Number of Physical Oceanographic Real-Time System (PORTS) installations (cumulative).	7 (2001)	21 (2008)
Improved effectiveness of NOAA's observing systems.	NOS does not currently have a performance metric to support this NOAA measure of success. However, NOS conducts activities that support this measure and a performance metric is under development.		

Strategy: Understand & Describe

NOAA Performance Measure	NOS Performance Metric	Baseline	Target
Increased number of modeling advances by government and academia demonstrated to improve the NOAA operational prediction suite.	Number of hydrodynamic models (cumulative).	4 (2001)	29 (2008)
Shortened cycle times from research (government and academic) to operations (e.g., models, technology, and techniques) through the use of testbeds and other methods.	NOS does not currently have a performance metric to support this NOAA measure of success. However, NOS conducts activities that support this measure and a performance metric is under development.		
Improved accuracy of weather and air quality prediction models.	NOS does not currently have a performance metric to support this NOAA measure of success. However, NOS conducts activities that support this measure and a performance metric is under development.		
Increased number of new research findings and progress toward their implementation into NOAA operations.	NOS does not currently have a performance metric to support this NOAA measure of success. However, NOS conducts activities that support this measure and a performance metric is under development.		

Strategy: Assess & Predict

NOAA Performance Measure	NOS Performance Metric	Baseline	Target
Increased use of observation data for verification of and assimilated into weather, ocean, water, and climate predictions models.	NOS does not currently have a performance metric to support this NOAA measure of success. However, NOS conducts activities that support this measure and a performance metric is under development.		
Increased number of forecasters trained in the newest techniques.	NOS does not currently have a performance metric to support this NOAA measure of success. However, NOS conducts activities that support this measure and a performance metric is under development.		

Increased volume of forecast and warning information formatted to clarify the uncertainty of an event (e.g., space weather, air quality, water, and weather forecasts).	Number of new operational nowcast/forecast models for U.S. ports and harbors (cumulative).	1 (2001)	9 (2006)
Improved performance of NOAA's weather and water, air quality, and space weather prediction suite.	Number of hydrodynamic models (cumulative)	4 (2001)	29 (2008)

Strategy: Engage, Advise & Inform

NOAA Performance Measure	NOS Performance Metric	Baseline	Target
Increased number of favorable scores on public surveys of citizen knowledge about appropriate actions under hazardous weather- and water-related conditions.	NOS does not currently have a performance metric to support this NOAA measure of success. However, NOS conducts activities that support this measure and a performance metric is under development.		
Increased percentage of the public reporting timely receipt of warnings as measured by public surveys.	NOS does not currently have a performance metric to support this NOAA measure of success. However, NOS conducts activities that support this measure and a performance metric is under development.		
Increased number of communities with plans in place to act on weather warnings and to reduce the impacts of coastal hazards.	Number of improved information management tools developed to assist coastal hazard mitigation (cumulative).	5 (2001)	13 (2008)
Increased number of communities with plans in place to act on weather warnings and to reduce the impacts of coastal hazards.	Number of activities conducted to provide a technically trained workforce and environmentally informed citizenry (per year).	22 (2001)	36 (2008)
Increased number of communities with plans in place to act on weather warnings and to reduce the impacts of coastal hazards.	Percent of shoreline and inland areas with improved ability to identify extent and severity of coastal hazards (cumulative).	8% (2001)	53% (2008)
Increased community knowledge of, use of, and satisfaction with NOAA information that supports local air quality monitoring and forecast programs	NOS does not currently have a performance metric to support this NOAA measure of success. However, NOS conducts activities that support this measure and a performance metric is under development.		

Increased assistance to international partners to improve response capabilities to weather and water predictions.	NOS does not currently have a performance metric to support this NOAA measure of success. However, NOS conducts activities that support this measure and a performance metric is under development.		

Goal 4. SUPPORT THE NATION'S COMMERCE WITH INFORMATION FOR SAFE, EFFICIENT, AND ENVIRONMENTALLY SOUND TRANSPORTATION

Strategy: Monitor & Observe

NOAA Performance Measure	NOS Performance Metric	Baseline	Target
Increased percentage of navigationally significant U.S. waters where hydrographic surveys provide accurate and up-to-date information on depth and obstructions.	Percent of critical area survey backlog reduced (43,000 snm total backlog in 1994) (cumulative).	31.2% (2001)	70.1% (2008)
Increased percentage of navigationally significant U.S. waters where hydrographic surveys provide accurate and up-to-date information on depth and obstructions.	Number of shoreline defined for 40 high priority port areas (8,000 nm total) (per year).	13.5% (2001)	20% (2003)
Increased reliability, frequency, and use of marine, aviation, and surface transportation-related observations.	Number of nautical chart editions published via lithographic/alternative methods (suite of 1000).	250 (2001)	70.1% (2008)
Increased reliability, frequency, and use of marine, aviation, and surface transportation-related observations.	Percent of U.S. areas within 200 km of a National Continuously Operating Reference Station (CORS) to measure user availability (cumulative).	91% (2001)	100% (2003)
Increased reliability, frequency, and use of marine, aviation, and surface transportation-related observations.	Percent of National Water Level Observation Network (NWLON) stations fully operational.	60% (2001)	75% (2004)
Increased reliability, frequency, and use of marine, aviation, and surface transportation-related observations.	Number of stations (2,700 total) with updated tidal current observations (per year).	10 (2001)	10 (2008)

Increased number of new mapping and assessment tools made available through a nationwide vertical-datum transformation tool and topographic/batymetrical mapping.	NOS does not currently have a performance metric to support this NOAA measure of success. However, NOS conducts activities that support this measure and a performance metric is under development.		
Increased percentage of counties with a demonstrated capacity to provide accurate positioning.	Percent of National Spatial Reference System (NSRS) completed.	75% (2001)	95% (2008)
Increased percentage of counties with a demonstrated capacity to provide accurate positioning.	Percent of Federal Base Network points with North American Vertical Datum (NAVD) 88 heights with 5 cm or better accuracy at 95% confidence level.	73% (2001)	100% (2005)

Strategy: Understand & Describe

NOAA Performance Measure	NOS Performance Metric	Baseline	Target
Shortened cycle time from research (government and academia) to operations (e.g., new techniques, improved products.)	Number of hydrodynamic models (cumulative).	4 (2001)	29 (2008)
Increased efficiencies and accuracy of the Global Positioning System through the application of innovative technologies.	NOS does not currently have a performance metric to support this NOAA measure of success. However, NOS conducts activities that support this measure and a performance metric is under development.		
Increased capabilities of data acquisition technologies, processing, and analysis.	NOS does not currently have a performance metric to support this NOAA measure of success. However, NOS conducts activities that support this measure and a performance metric is under development.		
Development of viable alternatives to ballast water exchange to prevent the introduction of exotic species to U.S. coastal waters.	NOS does not currently have a performance metric to support this NOAA measure of success. However, NOS conducts activities that support this measure and a performance metric is under development.		

Strategy: Assess & Predict

NOAA Performance Measure	NOS Performance Metric	Baseline	Target

Increased percentage of major U.S. ports where oceanographic "nowcast" (present conditions) and weather and marine forecast models are implemented.	Number of new operational nowcast/forecast models for U.S. ports and harbors (cumulative).	1 (2001)	9 (2006)
Increased number of port communities where the risks of operations and development have been assessed for impacts of coastal resources, coastal erosion, and coastal flooding.	NOS does not currently have a performance metric to support this NOAA measure of success. However, NOS conducts activities that support this measure and a performance metric is under development.		
Increased accuracy and use of weather and marine forecasts to increase efficiency of all land, water, and air transportation systems.	NOS does not currently have a performance metric to support this NOAA measure of success. However, NOS conducts activities that support this measure and a performance metric is under development.		

Strategy: Engage, Advise & Inform

NOAA Performance Measure	NOS Performance Metric	Baseline	Target
Increased percentage of charts available in the state-of-the-art Electronic Navigational Chart format.	Number of Electronic Navigational Charts (ENCs) in continual maintenance (cumulative).	135 (2001)	550 (2008)
Increased number and timeliness of responses to spills and other hazards threatening coastal environments and communities.	Number of nation's coastal ecosystems with reduced risks of habitat loss from releases of oil and hazardous chemicals due to response planning, mitigation, modeling, monitoring, and assessments (per year).	5 (2001)	5 (2008)
Increased percentage of U.S. ports where oceanographic and weather data are delivered in real time.	Number of Physcial Oceanographic Real-Time System (PORTS) installations (cumulative).	7 (2001)	21 (2008)
Increased user satisfaction with NOAA information within the transportation and coastal management sectors.	NOS does not currently have a performance metric to support this NOAA measure of success. However, NOS conducts activities that support this measure and a performance metric is under development.		

APPENDIX B: Glossary

Note: This appendix is currently under development.

Coastal - The land and water area extending from the inland boundary of coastal watersheds to the seaward boundary of the U.S. Exclusive Economic Zone. In the Great Lakes region, this includes the watersheds of the Great Lakes and St. Lawrence River.

Coastal stewardship - Advancing the sustainable use of coastal systems to support the nation's environmental well-being and economic prosperity on the public's behalf.

Cross-Cutting Priority -

Customers - Those who use the agency's products and services and to whom the agency is ultimately accountable.

Goal - An elaboration of the mission statement, developing with greater specificity how an agency will carry out its mission. The goal may be of a programmatic, policy, or management nature, and is expressed in a manner which allows a future assessment to be made of whether the goal was or is being achieved (OMB).

Marine Protected Area (MPA) - Any area of the marine environment that has been reserved by federal, state, territorial, tribal, or local laws or regulations to provide lasting protection for part or all of the natural and cultural resources therein (Executive Order 13158). There are many different types of MPAs in U.S. waters.

No-Take Marine Reserve - An MPA in which all extractive uses are prohibited.

MPA Zones - Discrete special use areas within a larger multiple use MPA that are intended to minimize user conflicts or impacts by allocating specific activities to appropriate habitats or times.

MPA Networks - An integrated suite of MPAs of various types in a region whose populations are ecologically connected through larval dispersal or adult migration, or both.

MPA System - A regional- or national-scale collection of MPAs and MPA networks of various types that collectively contribute in different ways to the long-term conservation, enjoyment, understanding and sustainable use of the nation's marine resources.

Measure of Success -

Metric - The quantification of the measure that includes a baseline, algorithm, resources and metric goal.

Mission - A concise statement on what the agency traditionally does or is supposed to do.

Objective -

Outcome Measure - High level performance measure. A description of the intended result, effect, or consequence that will occur from carrying out a program or activity. A long-term, ultimate measure of success or strategic effectiveness.

Output Measure - The quantitative tabulation, calculation, or recording of activity or effort. Activity or effort that will be produced or provided over a period of time or by a specified date, including a description of the characteristics and attributes (e.g., timeliness) established as standards in the course of conducting the activity or effort (OMB). A tactical or short-term quality or efficiency indicator for a program effort or activity.

Partner - Those with whom the agency works with to develop and deliver products and services.

Performance Measure - Performance measures describe a concept or focus area for monitoring improvements toward a goal or objective. Quantitative or qualitative data collected for feedback.

Stakeholders - Partners, customers, and others with an interest in the agency's activities and those who influence or impact agency work.

Steward - Someone who manages the property, finances or affairs for the benefit of another. As a leader in coastal stewardship, NOS integrates its own capabilities with those of the extramural community, actively protects and restores coastal environments in collaboration with others, provides technological and expert assistance to partners, and helps others achieve success in their coastal stewardship responsibilities.

Strategy -

Monitor and Observe -

Understand and Describe -

Assess and Predict -

Engage, Advise, and Inform -

Manage -

Vision - Long-term goal of strategy. Answers the question, 'How would the country be different if your mission were fully successful?'

APPENDIX C: NOS Organizational Chart